METHOD FOR CONSTRUCTING ERASURE CORRECTING CODES WHOSE IMPLEMENTATION REQUIRES ONLY EXCLUSIVE ORS

ABSTRACT OF THE DISCLOSURE

5   Error correcting codes of any distance (including codes of distance greater than four) use only exclusive OR (XOR) operations. Any code over a finite field of characteristic two are converted into a code whose encoding and correcting algorithms involve only XORs of words (and loading and storing of the data). Thus, the implementation of the encoding and correcting algorithms

10   is more efficient, since it uses only XORs of words – an operation which is available on almost all microprocessors. An important code, the (3, 3) code of distance four, is also described.

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